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Specification and Drawings as originally filed, with Application for Patent Serial No:
2,392,635, on July 5, 2002, by **AUTOMOBILITY DISTRIBUTION INC.**, assignee of
Robert A. Nelson, for "System and Method for Preventing Unauthorized Bypass of a
Remote Car Starter".


Agent certificateur/Certifying Officer

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Date

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**SYSTEM AND METHOD FOR PREVENTING UNAUTHORIZED BYPASS OF A
REMOTE CAR STARTER**

5 **Field of the invention**

The present invention relates to a system and method for preventing the unauthorized bypass of a OEM vehicle security system, or engine, or starter disable when a remote car starter is installed (either at the factory or aftermarket).

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Description of the prior art

Remote car starters are well known in the art and generally comprise an RF transmitter borne by a person and a device in a vehicle, which upon receipt of an appropriate signal emitted from the transmitter, allows the starter module to begin to start the vehicle.

In order for remote starters to function properly, it is necessary for them to be provided with a bypass kit. There are many companies that are designing or selling these vehicle-specific or generic by-pass kits. The problem with such kits or systems is that thieves are aware of this bypass and use it to steal a vehicle by applying a ground signal to the box (in the case of a microprocessor-based bypass) or by placing the bypass transponder close to the steering column (in the case of a transponder-based bypass).

25 **Summary of the invention**

It is an object of the present invention to provide a system and method for preventing such unauthorized bypasses.

In accordance with the invention, this object is achieved with a system comprising a transceiver (or remote) borne by a user; a receiver located in the vehicle, the receiver communicating with a module, which verifies the received

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signal and upon verification, sends a data signal to the metal box (such metal boxes are un-openable). Only upon receipt of the data signal is the car remotely started.

The invention consists in modifying the box so that it is bypassed only upon receipt and transmission of data. Simply applying a ground to the box will not bypass the remote starter.

Brief description of the drawings

The present invention and its advantages will be more easily understood after reading the following non-restrictive description of preferred embodiments thereof, made with reference to the following drawings in which:

Figure 1 is a schematic representation of the system according to a first preferred embodiment of the invention. This Figure shows a factory alarm bypass (transponder on board), showing the interconnection of the bypass with the remote starter. This interconnection can be through a data wire, or RF, where the information that is transmitted is data. The factory alarm bypass is encased in metal. The purpose of encasing the factory alarm bypass in metal is to prevent the transponder signal from exiting the bypass. If the bypass was not encased in metal, thieves would still be able to locate the bypass, physically approach the steering column with it and start the engine, since the receiver aboard the vehicle would still read the correct signal. Hence, the bypass is encased in metal, and the bypass will be activated only if the correct data is sent.

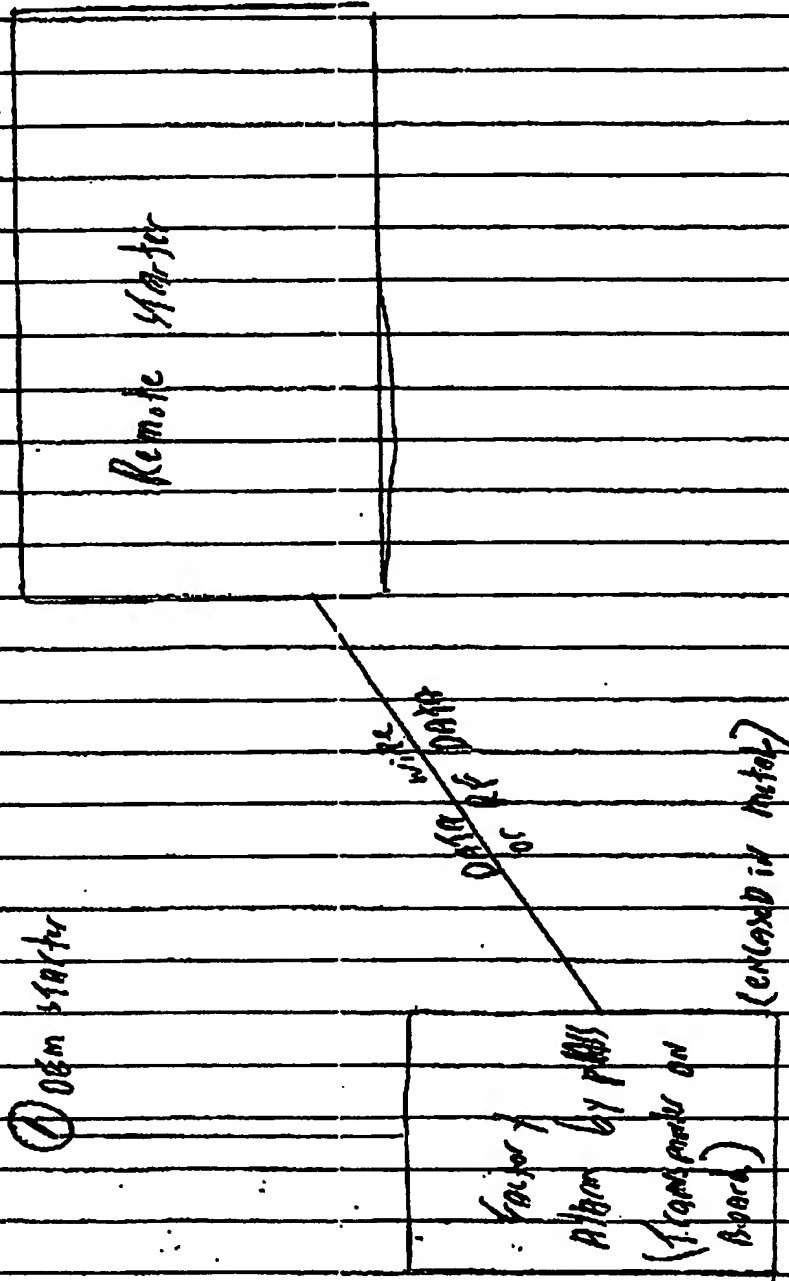
Figure 2 is a schematic representation of the system according to a second preferred embodiment of the invention. In this case, the bypass is micro-processor based, and the vehicle is, as is standard, equipped with a OEM security module. This module is in communication with the bypass, which does not have a transponder. The bypass is then in communication with the remote starter. Again, the information that is exchanged between the bypass and the remote starter is data, which helps prevent unauthorized bypass of the remote starter.

The data that is exchanged takes the form of a challenge and answer format, which is coded, similarly to code hopping. The remote starter sends a signal to the bypass, which answers with an answer. If the answer is correct, then the remote starter will start the engine.

5 Although the present invention has been explained hereinabove by way of a preferred embodiment thereof, it should be pointed out that any modifications to this preferred embodiment within the scope of the appended claims is not deemed to alter or change the nature and scope of the present invention.

Fig. 1

Fig. 1



① OEM starter

OEM security
module

Door

Factory security
by PALS
(microprocessor)
(No transponder)

data wire
V+ RF 1987
DC

Remote starter

Fig. 1